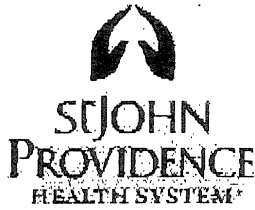


May. 9. 2016 3:00PM

NO. 0070 F. I

Miller, Ronald (2998505) - 5/2/2016



Providence Heart Institute

Non Invasive Cardiology
16001 West Nine Mile Road
Southfield, MI 48075
(248) 849-2000
(248) 849-2269 fax



Stress Echocardiogram

Patient:	Miller, Ronald	Study Date:	05/02/2016
MRN:	2998505	FIN#:	P102994324
DOB:	11/14/1950 (65 years)	Accession#:	3497816004
Gender:	Male	Ht/Wt:	185.4 cm / 88.6 kg
Patient Status:	Outpatient	BSA/BMI:	2.15 m ² / 25.8 kg/m ²
Study Location:	Echo Lab	BP:	175/ 111mm/Hg

Interpreting Physician: McKendrick, Gregor MD

Stress Tech: Moody, Crystal

Referring Physician: McGraw, Steven DO;

Sonographer: DiCello, Patty RDCS Shehu, Alketa RDCS

Indications: Chest Pain.

History: PMH: Smoker (former).

Study Conclusions

- **Stress echo:** Maximal asymptomatic exercise stress test without ECG or echo findings to indicate stress induced ischemia.
- **Left ventricle:** The cavity size is normal. Wall thickness is mildly increased. Systolic function is normal. The estimated ejection fraction is 65-70%. Grade I - LV Diastolic Impairment.
- **Right ventricle:** Wall thickness is normal. Systolic function is normal.
- **Mitral valve:** Grossly normal valve. There is trivial regurgitation.
- **Aortic valve:** Grossly normal valve. Trileaflet. No significant regurgitation.
- **Tricuspid valve:** Mild regurgitation, with no pulmonary hypertension.

Procedure information: Routine. Stress echocardiogram.

- Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded.
- Transthoracic stress echocardiography. Images were captured at baseline and peak exercise.

Image Quality: Good

Consent: The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained.

Study completion: There were no complications.

Chamber Size and Function

Left ventricle:

- The cavity size is normal. Wall thickness is mildly increased. Systolic function is normal. The estimated ejection fraction is 65-70%. Wall motion is normal; there are no wall motion abnormalities.

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- Grade I - LV Diastolic Impairment.

Left atrium:

- The atrium is normal in size.

Right ventricle:

- Wall thickness is normal. Systolic function is normal.

Right atrium:

- Well visualized.

Vessels:

- **Aortic root:** The aortic root is normal in size.
- **Ascending aorta:** The ascending aorta is normal in size.
- **Inferior vena cava:** The vessel is normal in size.

Pericardium:

- The pericardium is normal in appearance. There is no evidence of pericardial effusion.

Valves**Aortic valve:**

- Grossly normal valve. Trileaflet.
- No significant regurgitation.

Mitral valve:

- Grossly normal valve.
- There is trivial regurgitation.

Tricuspid valve:

- Grossly normal valve.
- Mild regurgitation, with no pulmonary hypertension.

Pulmonic valve:

- Grossly normal valve.
- There is no significant regurgitation.

Stress Echo Examination

Baseline ECG: Normal. Normal sinus rhythm.

Stress testing: Bruce protocol. Exercise duration 3 min (stage 1, 4.6 mets). Exercise was terminated due to achievement of target heart rate.

Stress results:

- Maximal asymptomatic exercise stress test without ECG findings to indicate stress induced ischemia.
- Maximal heart rate during stress was 134 bpm (86% of maximal predicted heart rate). The maximal predicted heart rate was 155 bpm. The target heart rate was achieved.
- There is a normal resting blood pressure with a normal response to stress. Peak Blood Pressure: 214/99 mmHg.
- The patient experienced no chest pain during stress.
- No complications.
- The stress ECG is negative for ischemia. Duke scoring: Exercise time 3 min. Maximum ST deviation: 0 mmno angina resulting score is 3. This score predicts a moderate risk of cardiac events.

Stage	HR	BP (mmHg)	Symptoms
Baseline	69	175/111 (132)	None

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Stage 1	134	-	-
Recovery; 1 min	122	-	-
Recovery; 2 min	91	214/98 (137)	-
Recovery; 3 min	69	212/112 (145)	-
Recovery; 5 min	68	194/112 (139)	-
Recovery; 10 min	68	180/100 (127)	-

Post stress:

- Left ventricular size is smaller.
- Left ventricular global systolic function is hyperdynamic.
- No evidence for new left ventricular regional wall motion abnormalities.

Stress echo results: Maximal asymptomatic exercise stress test without ECG or echo findings to indicate stress induced ischemia.

Measurements

Left ventricle	Value	Reference
LV ID, ED, PLAX chordal	3.9 cm	—
LV ID, ES, PLAX chordal	2.2 cm	—
LV fx shortening, PLAX chordal	(H) 44%	25 - 43
LV PW thickness, ED	(H) 1.1 cm	0.6 - 1.0
IVS/LV PW ratio, ED	1.09	—
Ventricular septum	Value	Reference
IVS thickness, ED	(H) 1.2 cm	0.6 - 1.0
LVOT	Value	Reference
LVOT ID, S	2.2 cm	—
LVOT area	3.80 cm ²	—
Aorta	Value	Reference
Aortic root ID, ED	2.9 cm	<4.2
Ascending aorta ID, A-P, S	3.3 cm	—
Left atrium	Value	Reference
LA ID, A-P, ES	(L) 2.6 cm	3.0 - 4.0
LA ID/bsa, A-P	(L) 1.2 cm/m ²	1.5 - 2.3
LA volume, biplane	37 ml	—
LA volume/bsa, ES, 2-p	17 ml/m ²	—
Mitral valve	Value	Reference
Mitral E-wave peak velocity	0.65 m/sec	—
Mitral A-wave peak velocity	0.67 m/sec	—
Mitral E/A ratio, peak	1	—
Tricuspid valve	Value	Reference
Tricuspid regurg peak velocity	1.84 m/sec	—
Tricuspid peak RV-RA gradient	14 mm Hg	—
Tricuspid maximal regurg velocity, PISA	1.84 m/sec	—

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Legend:

(L) and (H) mark values outside specified reference range.

Electronically signed by:
McKendrick, Gregor MD
05/02/2016 16:53